

"white fibro-serous urine." He objected particularly to the theory which identified white fibro-serous discharges in general with chyle. He gave his reasons for believing that it was more natural to consider them as equivalent to the white liquor sanguinis—to transudations of the serum of the blood during its periodical milkiness after meals, but with certain modifications inseparable from the mode of its secretion. Thus, while the water, albumen, and salts, and possibly also the fibrin, would come from the blood directly, he showed that the cells present in the discharge must be derived from the secretory layer of the skin, or from the epithelium of cutaneous glands. He contended that the molecular base was unquestionably derived from the blood; but that the molecules could not be conceived to filter directly through the walls of the vessels without presupposing the existence of a uniformly and intensely milky serum while the discharge was flowing, even at long intervals after meals. To avoid this difficulty, it might be supposed that the epithelial cells of the glands of the skin had the power of separating, by a perverted function, fatty matter from the blood, much as the epithelial cells of the intestine are concerned in filtering it into the lacteals. The cells would then become gorged with fatty molecules, and the uniformly white colour of the discharge would be accounted for without its being necessary to suppose that the liquor sanguinis was ever milky except, as usual after meals. On this view, white fibro-serous discharges would depend immediately on deranged glandular action, and the foregoing case might be defined as a rare functional affection of the glandular apparatus of the skin. The paper was illustrated by specimens of the milky discharge, and by a drawing of the diseased surface.—*Med. Times and Gaz.*, Feb. 7, 1863.

28. *Urine in Hydrophobia*.—Dr. HELLER, in *Wien. Med. Wochenschrift*, gives the following analysis of the urine of a lad six years old, who died of hydrophobia. The quantity operated on was about one pound. Its specific gravity was 1036, and very acid. The sediment consisted of uric acid, and was in greater abundance than Dr. Heller had ever met with. No urate of ammonia was found in the sediment. Of albumen, and of carbonate of ammonia, there was only a trace. It contained no sugar. The uropheine and uroxanthine were slightly increased. In the clear urine was also contained much uric acid. The urea was greatly increased, and was equal in quantity to what is met with in meningitis. The chlorides were very slightly diminished; the sulphates greatly increased. The earthy phosphates were much, and the alkaline phosphates slightly, increased.—*Brit. Med. Journ.*, Jan. 3, 1863.

29. *Effects of Diet and Drugs in the Treatment of Diabetes Mellitus*.—Dr. ANDREW SMART gives the following results, obtained from a series of observations—in two cases of diabetes mellitus treated by Dr. Laycock, in the Royal Infirmary, Edinburgh—instituted with the object of determining the sugar-producing agency of certain articles of diet.

The following articles are arranged in the order in which they were found, Dr. S. states, to act as sugar producers:—

"1. *Sugar* (cane), whether used as an article of diet or medication, besides undergoing transformation into grape sugar, acted as a powerful diuretic and stimulant to the morbid production of sugar. It also greatly increased thirst.

"2. *Rice*, contrary to general belief, was next to sugar in its influence on the production of diabetic sugar and increase of urine. Its action in these respects was much greater than can be explained by reference to the proportion of starch and sugar which it contains.

"3. *Potatoes* were inferior to rice in their sugar and urine-producing powers, but exerted a markedly greater influence than the ordinary sorts of wheaten bread.

"4. *Gluten Bread*.—We have not succeeded in ascertaining the exact composition of the bread usually sold under this name. It is decidedly sweet to the taste (but this saccharine quality does not depend on admixture with sugar). It is also very palatable, and preferred by diabetic patients to ordinary bread. It has been much recommended in diabetes, under the belief that, as an article of food, it operated more mildly in exciting and maintaining morbid action.

This opinion was contra-indicated by repeated and careful trials, the results of which demonstrate that its influence as a sugar eliminator exceeds that of ordinary white and bran bread.

"5. *White Bread*.—The trials with this bread, as with the others, were extremely varied, but invariably with like results. It undoubtedly produced less sugar than gluten bread, but was superior in that respect to brown bread and oatmeal. It is interesting to know that the amount of sugar found in the urine invariably maintained a fixed relation to the combined proportions of sugar and starch contained in the bread, the proportion of diabetic sugar always exceeding that of the starch and sugar elements as two to one. Thus, for example, if the amount of bread taken in twenty-four hours contained, say 500 grains of combined sugar and starch, and no other substance interfered with the experiment, a careful analysis of the urine during the same period yielded, with remarkable uniformity, nearly double that amount, *i. e.*, somewhere about 1000 grains.

"6. *Bran Bread*.—This bread differed in no important particular, except in its milder action in the production of sugar. But this difference was trivial.

"7. *Oatmeal*.—The influence of this cereal, when given weight for weight with the others, was so decidedly less that there can be no doubt in placing it last in the list now given. It diminished the amount of urine while rather heightening its density, but, as an article of diet, it was not relished by the patients.

"8. *Eggs*.—When the patients were put on an exclusively egg diet, the amount of urine and sugar progressively diminished, and the latter would probably have entirely disappeared from the urine had it been possible so to restrict the diet for a sufficiently lengthened period.

"9. *New Milk* contains sugar, as sugar of milk; but, judging from all the trials which were made with it, we were led to infer that this constituent does not undergo glucose transformation. Under this, as in egg diet, the sugar progressively disappeared from the urine. But the great difficulty always experienced was, to confine the patients for some time to one or two kinds of food.

"10. *Animal Diet*.—When eggs, milk, fish, beef, mutton, and all other kinds of animal diet, were given either alone or in combination, the following results invariably followed: 1. Marked decrease in the elimination of sugar and secretion of urine, which was progressive with the continuance of the diet. 2. Sense of hunger and thirst greatly lessened. 3. Increased density of urine.

"11. *Vegetables*, such as cabbages and turnips, sensibly augmented the production of sugar, but to a much smaller amount than is generally supposed. They were also apt to derange the digestive system. Cabbage invariably produced diarrhœa in one of the patients, and in the other indigestion and flatus.

"12. *Cod-liver Oil and Fats*.—Their use was followed by the same results as were found in the animal diet trials; but they could not be taken by the patients for some time, or in considerable quantity, without inducing nausea.

"13. *Mixed Diet*.—The production of sugar under this diet, of whatever substances it may be composed, was found to be invariably proportional to the amount of sugar and starch contained in the articles which were used.¹

"II. *Second Series of Trials to Determine the Influence of Remedies on the Elimination of Diabetic Sugar.*

"1. *Permanganate of Potash*, allayed thirst, lowered the density, but increased the amount of the urine and also of the sugar.

"2. *Sesquinitrate of Iron* stimulated appetite for food; did not allay thirst; did not materially influence the amount of urine, but increased that of the sugar.

¹ *Porter and Ale*.—It is generally supposed that all malt liquors very powerfully stimulate to the morbid production of sugar in diabetes mellitus; but the experiments made with ale and porter do not support that opinion. Their use, to the extent of twelve or twenty-four ounces daily, is attended with little more than an appreciable increase in the amount of sugar. The rate of increase, as in the other articles, was ascertained and recorded.

"3. *Glycerine* markedly increased thirst and the amount of urine; lowered density of urine, but total amount of sugar greatly increased.

"4. *Chloroform*.—This was exhibited by inhalation, which was repeated every two hours during the experiment. Quantity of urine greatly increased; its density lowered, but total amount of sugar in twenty-four hours increased. Chloroform increases sugar simply by acting as a diuretic.

"5. *Sulphuric and Chloric Ethers*.—Both these agents operate as chloroform, but in a much less marked degree.

"6. *Strychnia*.—The experiments with this powerful agent were begun by administering $\frac{1}{4}$ th of a grain thrice daily, and the dose progressively increased until its physiological action on the nervous system became incipiently apparent.

"The result was a progressive and commensurate decrease in the amount of urine and sugar. The patients' diet during the course of this and the other trials of remedies was uniform. The patients' general health was good, and they gained weight."—*Med. Times and Gaz.*, Feb. 14, 1863.

30. *Diabetes*.—Dr. MÜLLER, of Hanover, read a paper before the Congress of German Naturalists and Physicians at their last meeting, on diabetes, with details of thirty-one cases observed by him: twenty-three of the patients were men, and only eight women. Amongst the causes, masturbation was most frequent. Twelve of the patients died, nine of them rapidly, of tubercular disease, and three of Bright's disease. As regards the treatment, animal food and gluten had proved very unsatisfactory, and a mixed diet was far preferable. Tannin, either alone, or with aloe and rheum, gave good results, and small doses of opium at night were advisable. The use of the thermal springs of Carlsbad produced amelioration in every one of the cases; but the benefit was not permanent: in one case it lasted for nineteen months, in another for ten months. The largest quantity of urine observed amounted to nineteen and a half quarts, the largest quantity of sugar to ten per cent.; the highest specific gravity was 1.058. In five cases there was amblyopia and morbus Brightii. An animated discussion followed the reading of this paper, and several of the Carlsbad physicians communicated their experience on the use of the waters of this place. Professor Seegen said that he had treated more than forty cases of diabetes with Carlsbad water, that there had been a diminished amount of urine and sugar, and the weight of the body had become augmented, but a complete cure had never been effected. Most of the patients in question used the Carlsbad treatment for several years successively, and each time with benefit. The improvement was generally rapid, and lasted for a considerable time. Dr. Fleckles said that, if diabetes was complicated with anæmia, the use of Franzensbad, Pyrmont, or Spa, was advisable after a course of the Carlsbad treatment.—*Med. Times and Gaz.*, Dec. 13, 1862.

31. *Action of Sesquichloride of Iron on Phthisis*.—Dr. RICHARD PAYNE CORRON administered the sesquichloride of iron in twenty-five cases of uncomplicated phthisis furnished by his own wards in the Consumption Hospital. Of this number, eight were males, and seventeen females. Eleven were in the first, four in the second, and ten in the third stage of the disease. None of the cases presented any very remarkable feature, all of them being examples of the ordinary run of patients affected with chronic consumption, care having been taken to exclude those in whom there existed either any special complication or secondary affection which demanded a different treatment.

The dose consisted of ten or fifteen minims of the *tinctura ferri sesquichloridi* administered in water two or three times a day, and was continued for periods varying from three weeks to four months. Cod-liver oil was also taken sometimes by a few of the patients; but, as a general rule, this substance was avoided, at least temporarily, with the view of not complicating the result.

Twelve patients improved greatly, five improved slightly, and eight experienced no relief whilst under treatment. Ten of the seventeen more or less improved cases did not take any cod-liver oil; but, by subsequent observations, it